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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/502,302

Applicant(s)

ANDREYKO ET AL.

Examiner

JOSEPH G. USTARIS

Art Unit

2424

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- _____ Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- _____ Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed October 20, 2008 (applicant's arguments filed on December 8, 2008 discusses a rejection based on Lazeron. Lazeron was not used to reject this case, therefore the examiner will consider arguments filed on October 20, 2008) have been fully considered but they are not persuasive.

Applicant argues with respect to claims 1-21 that Keeney has no feedback loop and concurrent adjustment of the signal producing the image for the users. However, reading the claims in the broadest sense, Keeney does disclose those features. Keeney discloses a feedback loop (e.g. the data from the cameras monitoring the eyes of the users watching the live transmission of the image) and concurrent adjustment of the signal producing the image for the users (e.g. the process is done in real time during live transmission of the image) (See Fig. 2; col. 3 lines 48-51).

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Drawings

2. The drawings are objected to because replacement sheet Fig. 14 is a duplication of Fig. 15. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1, 7, 9, 10-12, 16, and 19 are objected to because of the following informalities.

Claim 1 recites "perceptiion" in page 4.

Claim 1 recites "siad one eye" in page 5.

Claim 7 recites "every of information display component" and "the of video signal" in page 7.

Claim 9 recites "the of video signal" in page 8.

Claim 10 recites "the of video signal formation" and "the of video signal conversion" in page 8.

Claim 11 recites "the of video signal formation" in page 9.

Claim 12 recites "the of video signal formation" and "the of video signal conversion" in pages 9 and 10.

Claim 16 recites "every of information display component" and "the of video signal" in page 11.

Claim 19 recites "the of video signal formation" and "the of video signal conversion" in page 12.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7-13, 15, and 16-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 7 and 16, it is unclear how "transmitting the video signal of the lowest quality level of video image via the data channels of data transmission to every of information display component directly or via the of video signal conversion component, associated with the relevant information display component." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claim 8, 17, and 18, it is unclear how "identifying the value of the pixel of the video image of low quality level as the mean value of video signal of high quality level of the video image, forming a part of the video image sector, restricted with boundaries of the above pixel." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claim 9, it is unclear how "determining the pixel value of video signal of low quality video image, as the value of one of pixels of the video signal of high quality level of video image, formed a part of video image section restricted with boundaries of the above pixel." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claim 10, it is unclear how "forming a video signal of the first extended quality level in the of video signal formation component or in the of video signal conversion component respectively by the subtraction from the video signal of the first high quality level of the video signal of the basic quality level, whereas forming the video signal of the second and the further extended quality levels by the subtraction from the video signal of the relevant high quality level of the video signal with the quality level reduced with respect to it respectively; in this connection, the lowest level of video signal quality is the basic level of video signal quality in the conversion component of video signals connected with the information display component for every video signal, summarizing video information of the relevant video signal and video information of all

video signals with quality level lower than the stated quality level, except for an extended video signal corresponding to the highest quality level of video image within the limits between the external boundary of the above video signal and the external boundary of the video signal with high quality level with respect to the stated video signal; forming the video signal with a higher quality level by summing within the limits of the boundary of the assigned sector of video information of video signals of all quality levels." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claim 11, it is unclear how "forming the video signal with the basic quality level in the of video signal formation component and is converted in the of conversion component into the standard video signal and is transmitted to the information display facilities of the users and/or a non-restricted group of users provided with standard information display facilities." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claims 12 and 19, it is unclear how "determining the pixel of the video signal of the extended quality level of video image in the of video signal formation component or in the of video signal conversion component by subtraction of high quality level pixel of video image; forming video signal pixel with basic quality level in the of video signal conversion component or the information display component and video signal pixel of high quality level of the video image by way of summing the video signal

pixel of the extended quality level and the video signal pixel of the quality basic level."

The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claims 13 and 20, it is unclear how "determining the video signal pixel of basic quality level in the video signal formation component or video signal conversion component as equal to the video signal pixel of high quality level forming a part of video signal pixels of high quality level of video image sector, included into video image sector, restricted with boundaries of the above video signal pixel of the basic quality level; determining the other pixels by way of subtraction of video signal pixels with basic quality level from the pixels of high quality level, determining video signal pixel of high quality level in the facilities of video signal conversion or information display as corresponding to video signal pixel of the basic level; forming the other video signal pixels of high quality level included in the video image sector restricted with the boundaries of the pixel of the relevant video signal of the basic quality level by way of summing the relevant video signal pixels of the extended quality level and the relevant video signal pixel of the basic quality level." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Regarding claims 15 and 21, it is unclear how "recording converted video signals of low or basic quality level previously on video signal medium, displaying the video signal of low or basic quality level synchronously with produced video signals of high or

extended quality level accordingly." The language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement (See MPEP 2173.02).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Keeney et al. (US007027655B2).

Regarding claim 1, Keeney et al. (Keeney) discloses a method of interactive television wherein a video signal is generated based on user visual perception of video images (See Fig. 2) comprising the steps of:

forming a video signal of an entire frame of a video display and generating a video image or video signals of sectors of said video image (See Fig. 2, 10) with substantially equal quality levels (See Fig. 2, 10; wherein the motion picture image data have one equal quality level), in a video signal formation component (See Fig. 2, e.g. the provider of the original motion picture image data);

converting the video signal at least one time in a video signal conversion component (e.g. a MPEG encoder) into a series of video signals of the sectors of the video image (e.g. I,P, and B frames) (See col. 1 line 66 – col. 2 line 18 and col. 8 lines 20-28) and/or

converting the level quality of the video image sectors (See col. 1 line 66 – col. 2 line 18; the Q factor level), and/or

changing internal boundaries of the video image (See col. 1 lines 66- col. 2 line 18, defining blocks with higher activity),

transmitting all said video signals via data channels (See Fig. 2; col. 8 lines 20-28), at least, one conversion component (See Fig. 2, 40) and, to at least, one information display component (See Fig. 2, 70 and 10'),

forming a secondary video image on a screen of the information display facility (See Figs. 1 and 2, 70 and 10'), which is perceived, at least, by one user (See Fig. 2, 60),

determining resolution characteristics (e.g. area of interest determined by the eyes of the users) by employing at least one sensor (See Fig. 2, 20) in operative communication with one eye of the user with respect to the video image formed by the information display component and perceived at an eye resolution by said one eye of said user (e.g. area of interest determined by the eyes of the users) (See col. 6 lines 16-41), and

employing data from said sensor to dynamically form signal coding characteristics (See Fig. 2, 30; col. 6 lines 16-41, area of interest the eyes identified)

based on said data from said sensor as to said eye resolution of at least said one eye of the user (See Fig. 2),

transmitting signals having said signal coding characteristics to, at least one computing component (See Fig. 2, 50; e.g. a Q-Map generator);

generating an interrogation signal (See Fig. 2, Q-Map 50) with said computing component, taking into account the eye resolution (e.g. area of interest), communicated in the coding characteristics (See Fig. 2), said interrogation signal containing information on the boundaries (See Fig. 3, 12; boundaries of area of interest), at least, in one sector of the video image and/or the quality levels (See Fig. 3, 12; area of interest will have higher quality levels), at least, in one sector of the video image of the eye resolution of at least said one eye, of said at least, one user and, based on the eye resolution ascertained from a group of users' eyes (See Fig. 2 and 3; multiple user eyes were used to determine the various area of interests);

transmitting said interrogation signals (e.g. Q-Map) to at least two of the video signal formation components, video signal conversion components (See Fig. 2, 40) and information displays components (See Fig. 2, 10'), in which the interrogation signal is taken into account with respective

forming of video signals (See Fig. 2, 40; e.g. forming the video signals at the encoder 40),

converting of video signals (See Fig. 2, 40; e.g. converting the video into an MPEG video) and

forming of video image (See Fig. 2, 10'; e.g. forming the image on the screen).

Regarding claim 2, according to which the computing component generates an interrogation signal for a group of users (See Fig. 2, group of users 60), which differs by the fact, that is a summarizing interrogation signals for the users and/or groups of users taking part of the above group (See Fig. 2, Q-map and Fig. 3, 12; col. 5 lines 58-64; the Q-Map represents a summarization of all the signals from the group of users).

Regarding claim 3, which differs by the fact, that summarizing interrogation signals coding external boundaries (See Fig. 3, 12; the external boundaries of the area of interests) of video image sectors of a similar quality level for each level of video image quality coded in a series of interrogation signals for a group of users (See Fig. 3, 12; the area of interests represents image sectors of similar quality level based on what the group of users identify as an area of interest); in this connection, for each interrogation signal (e.g. from each user) the respective external boundary of the video image sector of each quality level comprises external boundaries of all video image sectors with indicated quality level (See Fig. 3, 12; col. 6 lines 16-41; the area of interests are defined by external boundaries and will all have a higher quality level).

Regarding claim 4, which differs by the fact, that summarizing interrogation signals for the indicated users' group coding the quality level (See Fig. 3, 12; the area of interests will all have a higher quality level) of video image for each sector of video image coded in a series of interrogation signals for a group of users (See Fig. 3, 12; the area of interests represents image sectors of similar quality level based on what the group of users identify as an area of interest); in this connection, the quality level of each sector of interrogation signal video image for a group of users is taken as having

the highest quality level for the corresponding sector of video image of each interrogation signal of users or a group of users forming a part of the given group (See Fig. 3, 12; col. 5 lines 58-64 and col. 6 lines 16-41; the area of interests are will all have a higher quality level).

Regarding claims 5/4, 5/3, 5/2, 5/1, which differs by the fact, that forming series of video signals of the entire video image of high and low quality level of video image in the video signal formation component (See Fig. 2, 70; col. 1 line 66 – col. 2 line 18; the Q factor allows blocks with more activity to have a higher quality), changing boundaries of each sector of video image in the video signal conversion component (See Fig. 2, 40 and Q-Map; col. 5 lines 58-64; the Q-Map is used to add/change boundaries) except for the sector of video image of the highest quality level (See Fig. 3, 12; e.g. the blocks already defined as an area of interest) such that the internal boundaries (See Fig. 3, 12 and 50; the boundaries of the area of interests are also considered internal boundaries because that are within the video image) of the above sector correspond to the external boundaries of the video signal area (See Fig. 3, 50; the boundaries are also external with respect to the area of interest) with a higher quality level of video image with respect to the sector with variable boundaries (e.g. the boundaries change from frame to frame (e.g. variable) based on the Q-Map for each frame, wherein the boundaries divide the high quality level from the low quality level).

Regarding claim 6, which differs by the fact, that converting a video signal of the entire video image into a series of video signals with quality level of the video image (See Fig. 2, 70; col. 1 line 66 – col. 2 line 18; the original Q factor), with the lower quality

level of the video image of the initial video signal (e.g. the original Q factor of the MPEG standard is considered the lower quality level when compared to the Q-Map).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keeney et al. (US007027655B2) in view of Griepentrog (US005894327A).

Claims 14 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim.

However, Keeney does not disclose that scanning the screen with an electronic ray in the data display component using the CRT, transmitting video signals coding boundaries of the sector of extended video image to the electron gun to the component of sector output control at the entry of the electronic ray into the sector area with the other quality level, to the control component of the image sector output with control signal delivery to the change of the size of the luminous spot on the CRT screen to the size corresponding to the size of a pixel of video image of video image sector.

Griepentrog discloses a video display system. Griepentrog discloses scanning the screen with an electronic ray (See Fig. 1, red 32, blue, 34, and green 36) in the data display component using the CRT (See Fig. 1, 30), transmitting video signals (e.g. s1 or

s2) coding boundaries of the sector of extended video image (e.g. the video signal has boundaries of the video) to the electron gun (See Fig. 1, red 40, blue 42, and green 44) to the component of sector output control (See Fig. 1, 64) at the entry of the electronic ray into the sector area with the other quality level (e.g. the quality level of the video signal), to the control component (e.g. control unit 70) of the image sector output with control signal delivery to the change of the size of the luminous spot on the CRT screen to the size corresponding to the size of a pixel of video image of video image sector (See Fig. 1; col. 4 line 20—col. 5 line 19; e.g. the system changes of the size of the luminous spot on the CRT screen to the size corresponding to the size of the video image on the video signal thereby forming an image on the CRT screen). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Keeney to scan the screen with an electronic ray in the data display component using the CRT, transmit video signals coding boundaries of the sector of extended video image to the electron gun to the component of sector output control at the entry of the electronic ray into the sector area with the other quality level, to the control component of the image sector output with control signal delivery to the change of the size of the luminous spot on the CRT screen to the size corresponding to the size of a pixel of video image of video image sector, as taught by Griepentrog, in order to optimize the performance of the display system (See col. 2 lines 19-39).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JOSEPH G. USTARIS** whose telephone number is (571)272-7383. The examiner can normally be reached on **M-F 7:30-5 PM**; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph G Ustaris/
Primary Examiner, Art Unit 2424